REMARKS

Summary of the Office Action

In the final Office Action mailed on August 27, 2009, the Examiner objected to the specification for failing to provide proper antecedent basis for a "computer readable medium" as claimed.

The Examiner rejected claims 1-48 and 50-56 on the grounds of nonstatutory double patenting over:

claims 1-4, 9-14, 16, 18, 20-24, 27-38, 40, 41, 43, and 45-55 ("the '387 claims"), of U.S. Patent App. No. 09/684,387 ("the '387 Application"), and

claims 1-32, 34-63, 65-81, 91, 92, 94, 95, 97, 99-101, 103, 106, and 108-119 ("the '706 claims") of U.S. Patent App. No. 09/684,706 ("the '706 Application").

The Examiner rejected claims 1-6, 8, 14-24, 30, 34, 39-45, 48, and 52-56 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,414,955 ("Clare") in view of Wesson et al., "Network Structures for Distributed Situation Assessment", IEEE Transactions on Systems, Man, and Cybernetics, Vol. 11, No. 1, pp. 5-23 ("Wesson").

The Examiner rejected claims 25-29, 31, 32, 46, 47, 50, and 51 under U.S.C. § 103(a) as being unpatentable over Clare-Wesson in view of U.S. Patent No. 6,615,088 ("Myer").

The Examiner rejected claims 7, 9-13, 33, 35, and 36 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson in view of U.S. Patent No. 6,546,419 ("Humpleman").

The Examiner rejected claim 37 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson in view of U.S. Patent No. 5,742,829 ("Davis").

The Examiner rejected claim 38 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson in view of U.S. Patent Pub. No. 2002/0154631 ("Makansi").

Interview

Applicants thank Examiner Sciacca for the telephone interview conducted on October 20, 2009, during which Applicants' representative, Scott Miller, and the Examiner discussed claim 1 in light of Clare and the rejection under 35 U.S.C. § 103(a). Applicants discussed the Examiner's interpretation of claim 1 with respect to the element of "modifying the cluster indication in the assembly packet, and transmitting the assembly packet with the modified cluster indication to each node neighboring the node," as the Examiner set forth in the pending Office Action.

Status of the Claims

Applicants have amended claims 1-2, 9-10, 23, 35, 46, 48, 50, 51, 54, and 56. No new matter has been added. Support for these amendments may be found generally throughout the specification and specifically on at least page 17, line 22 – page 18, line 22 (general description of network with sensor nodes) and page 49, line 17 – page 52, line 10 of the specification (use of assembly packets in flooding algorithm). See also Figures 8-9 and 30-34.

Currently pending are claims 1-48 and 50-56, of which claims 1, 46, 48, 50, 51, 54, and 56 are independent and the remainder are dependent.

Response to Objections to the Specification

As mentioned above, the Examiner objected to the specification as failing to provide proper antecedent basis for a "computer readable medium." (Office Action, page 2). Specifically, the Examiner indicated that although the specification has been amended to recite a "computer readable medium", the specification still fails to provide proper antecedent basis for the "computer readable medium" as claimed since the "computer readable medium" is not defined in such a way that the Examiner can determine whether it is limited to statutory forms of computer storage. (Id.)

Applicants have amended claims 48 and 50 to recite a "tangible computer readable medium having executable instructions stored therein, execution of which by a processing system causes the processing system to collect and process data in a sensor network by ..." Accordingly, the "computer readable medium" as claimed is statutory, as the "computer readable medium" is a tangible medium having stored instructions. Thus, the objection to the specification is moot.

Accordingly, Applicants respectfully request withdrawal of the objection to the specification.

Response to Claim Rejections

1. Claim 1 is patentable over Clare in view of Wesson as the cited art does not disclose (a) "if the at least one node has received a previous assembly packet, the at least one node ignores the assembly packet" and (b) "if the at least one node has not received a previous assembly packet, the at least one node (i) determines a cluster for the node based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each node neighboring the node", as recited in claim 1.

In claim 1, Applicants recite a method for operating a sensor network comprising a plurality of nodes. Applicants have amended claim 1 to recite "in response to reception of

the assembly packet at the at least one node, if the at least one node has received a previous assembly packet, the at least one node ignores the assembly packet." The cited references do not disclose or suggest "in response to reception of the assembly packet at the at least one node, if the at least one node has received a previous assembly packet, the at least one node ignores the assembly packet."

Further, Applicants have amended claim 1 to recite "in response to reception of the assembly packet at the at least one node . . . if the at least one node has not received a previous assembly packet, the at least one node (i) determines a cluster for the node based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each node neighboring the node." The cited references do not disclose or suggest "in response to reception of the assembly packet at the at least one node . . . if the at least one node has not received the assembly packet, the at least one node (i) determines a cluster for the node based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each node neighboring the node."

Because neither Clare nor Wesson show or suggest "if the at least one node has received a previous assembly packet, the at least one node ignores the assembly packet", Applicants believe that the combination of Clare and Wesson fail to show or suggest all of the elements of claim 1. Further, because neither Clare nor Wesson show or suggest "if the at least one node has not received a previous assembly packet, the at least one node (i) determines a cluster for the node based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each node neighboring the node", Applicants believe that the combination of Clare and Wesson fail to show or suggest all of the elements of claim 1. Accordingly, Applicants submit that claim 1 is not obvious in light of Clare and Wesson.

Therefore, Applicants respectfully request withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a).

2. Claims 46, 48, 50, 51, 54, and 56 each are patentable over Clare-Wesson (or Clare-Wesson in view of Meyer) as the cited art does not disclose "if the at least one network element has received a previous assembly packet, the at least one network element ignores the assembly packet, and if the at least one network element has not received a previous assembly packet, the at least one network element (i) determines a cluster for the network element based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each network element neighboring the network element."

Claim 46 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson in view of Meyer. Claim 46 recites, *inter alia,* "organizing a plurality of network elements including a start node and at least one sensor node into a plurality of clusters by flooding an assembly packet from the start node to each network element in the plurality of network elements." Applicants have amended claim 46 to clarify that "flooding an assembly packet comprises:

receiving an assembly packet from a first network element at at least one network element neighboring the first network element, wherein the assembly packet includes a cluster indication, and

in response to reception of the assembly packet at the at least one network element,

if the at least one network element has received a previous assembly packet, the at least one network element ignores the assembly packet, and

if the at least one network element has not received a previous assembly packet, the at least one network element (i) determines a cluster for the network element based on the cluster indication in the assembly packet, (ii) modifies the assembly packet to include a modified cluster indication, and (iii) transmits the modified assembly packet with the modified cluster indication to each network element neighboring the network element."

As described above for claim 1, neither Clare nor Wesson disclose or suggest use of assembly packets or flooding assembly packets from a start node to each network element, to organize a plurality of network elements into a plurality of clusters, wherein flooding an assembly packet comprises the recited elements of claim 46.

Myer discloses a system and method for device driver configuration. (Myer, column 1, lines 8-10). Myer describes a control network portal coupled between the Internet and one or more control area networks. (Myer, column 2, lines 42-54). The control area networks may include master controllers that are used to install and configure components in a control system. (Myer, column 2, lines 60-63 and column 5, lines 26-45). The control area networks may use network connectivity that is "wired, wireless, power line carriers, or any suitable transmission medium." (Myer, column 2, lines 59-60). When a new device

connects to the control area network, the new device informs the master controller of the manufacturer name and device type. (Myer, column 6, lines 1-7). The master controller may retrieve a configuration file for the new device and then graphically display the configuration file for user control. (Myer, column 6, lines 12-49).

However, Myer does not cure the deficiencies of Clare and Wesson. Applicants therefore submit that claim 46 is allowable over Myer. Applicants therefore submit that claim 46 is allowable over the cited art and thus respectfully request the Examiner withdraw the rejection of claim 46 under 35 U.S.C. § 103(a).

Applicant has similarly amended each of claims 48, 50, 51, 54, and 56 to clarify the element of "flooding an assembly packet." Also, each of claims 48, 50, 51, 54, and 56 were rejected by the Examiner relying on either the Clare-Wesson or Clare-Wesson-Myer combination. Applicants therefore submit that the each of claims 48, 50, 51, 54, and 56 is allowable over the cited art, for at least the reasons presented for claims 1 and 46, and thus respectfully requests the Examiner withdraw the rejections of claims 48, 50, 51, 54, and 56 under 35 U.S.C. § 103(a).

Further, Applicants submit that each of the dependent claims is allowable for at least the reason that each dependent claim depends from an allowable base claim. Applicants therefore request the Examiner withdraw the rejections of each of the dependent claims under 35 U.S.C. § 103(a).

3. Response to the double patenting rejections made by the Examiner

Applicants submit that all pending claims are in condition for allowance. Accordingly, Applicants submit that the provisional double patenting rejections based on U.S. Patent Application Nos. 09/684,387 and 09/684,706 should be withdrawn.

Conclusion

In view of the foregoing, Applicant submits that all pending claims are allowable, and thus Applicant respectfully requests allowance of these claims. Should the Examiner wish to discuss this case, the Examiner is invited to call the undersigned at (312) 913-3350.

Respectfully submitted,

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Dated: November 13, 2009   By: /Scott M. Miller/_____
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